SUMMARY

The Plutonium Finishing Plant (PFP) consists of Project Baseline Summary (PBS) RL-CP03, Work Breakdown Structure (WBS) 3.3.3.

NOTE: The Safety, Conduct of Operations, milestone table and Cost/Schedule data contained herein is as of November 30, 2001. Other information is updated as noted through December 21, 2001.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, and RL) shows that no milestones were completed on schedule. One milestone was completed late and one FY 2001 milestone is overdue. Further details can be found in the milestone list.

NOTABLE ACCOMPLISHMENTS

Maintain Safe & Secure SNM WBS 3.3.3.1

Development of operating procedures and the user guide for the remote robotic surveillance system that will be utilized during the polycube stabilization campaign was completed.

Maintain Safe and Compliant PFP WBS 3.3.3.2

The Washington Department of Health's (WDOH) Level II Inspection of air emission units including stacks Z-1, 3, 5, 6, 7, 14, and 15 were evaluated. The Washington State Department of Ecology inspection of PFP's Diesel Fuel Underground Storage Tank was completed. Scale model tests of the 291-Z-1 Stack for replacement of the sample probe were completed. In an effort to raise the level of awareness of the 2736-ZB Fire Protection System OSR requirements, SOI 01-009, Enhanced OSR Operability Assurance Process, was issued. System training will be revised, and a revision to the AJHA Fire Protection section is being developed. The newly installed Project W-460 supply and exhaust fire dampers were functionally tested in accordance with National Fire Protection Association (NEPA) 90A (with air flow at normal operation). Through November 30, 2001 there were 728 calendar days (exceeding 2.4 million staff hours) since the last recorded lost workday injury.

Stabilization of Nuclear Material WBS 3.3.3.3

Residues — Fiscal Year To Date (through December 21, 2001) 151,395 grams of Hanford Ash were packaged in Pipe Overpack Containers (POCs). This reporting period, fifteen POCs were shipped to the Central Waste Complex (CWC). The three turnings in oil items were transferred to the Plutonium Process Support Laboratories (PPSL) for evaluation. Removal of the last of the SS&C material from HA-20MB glovebox was completed on November 27, 2001. This material removal clears the way for the installation of the new TGAs in that glovebox and will allow the stabilization of less than pure oxides.

Solutions ¾ The monthly production for the Solutions Stabilization Project was 522 liters; an increase of 116 liters from last month. This included a total of 380 liters through the direct discard process and 142 liters through the oxalate precipitation process. Testing by PNNL and Plutonium Process Support Laboratories (PPSL) to support the shift from Product Nitrate to Criticality Mass Laboratory (CML) solution was completed. A letter report documenting the results of the testing was transmitted to DOE RL. Contents of the 241-Z tank D-5 were successfully transferred to tank farms.

Project W-460 ¾ The final phase of W-460 construction is underway with the construction of the new security entrance into the 2736-ZB building. The anticipated construction completion date is early February. The 2736-ZB roof repair was completed in November. Following completion of the FH ORR, the RL ORR was conducted and completed on November 21, 2001 that identified 6 prestart items. Upon successful completion of these prestart items, plant management requested startup authorization from RL on November 26, 2001. RL granted authorization on November 28, 2001 to proceed with startup operation of the 2736-ZB bagless transfer system. Hot startup was achieved on November 29, 2001.

234-5Z Thermal Stabilization & Bagless Transfer System (BTS) ¾ Thirty-nine bagless transfer cans were successfully welded out and 38 furnace runs were completed. All SS&C materials stored in glovebox HA-20MB were removed by the Residues Team. Design review for installation of three TGAs in glovebox HA-20MB was completed. The TGAs were ordered and were shipped from Germany on December 7. Fabrication of the chloride oxides treatment system at PNNL was completed and testing initiated. BTC packaging of previously stabilized oxides was initiated utilizing excess capacity for the BTS equipment. Two BTCs were created this month. Furnace drying of $Mg(OH)_2$ precipitate stored in glovebox HA-23S was initiated utilizing excess capacity of the furnaces.

Disposition of Nuclear Material WBS 3.3.3.4

Actively participated in the 'Alternate Vault Study', a multi-organizational study aimed at determining if a low cost storage method could be found if the plutonium could not be shipped offsite in an expedited manner. Thermal calculations to verify that Pu packages would not exceed the thermal heat specification were performed on over a hundred items this month. Shipped 75 waste containers including 32 Hanford Ash POCs, and 43 TRU, TRU-Mixed, Low-Level, and Low-Level Mixed Waste during the month of November.

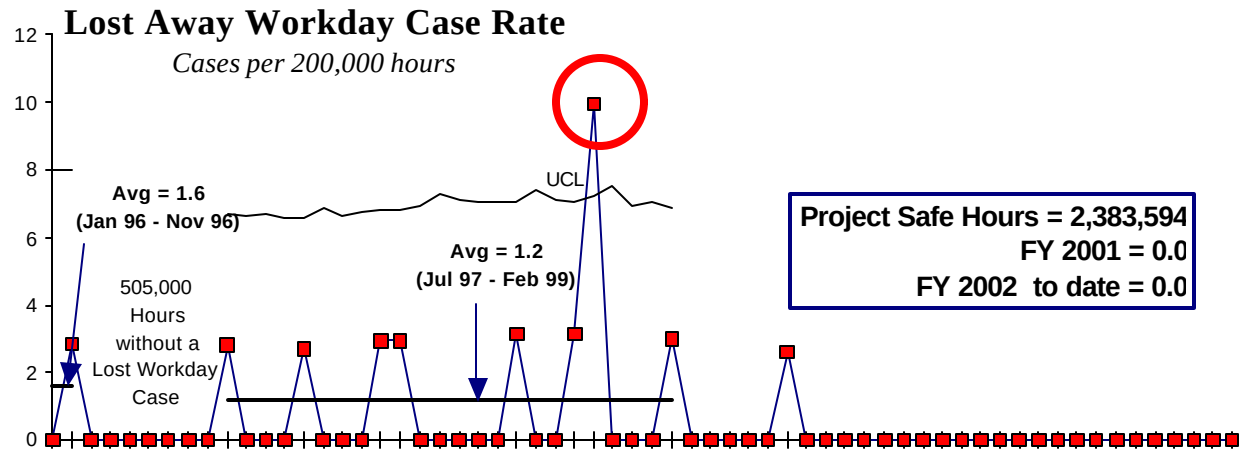
Disposition PFP Facility WBS 3.3.3.5

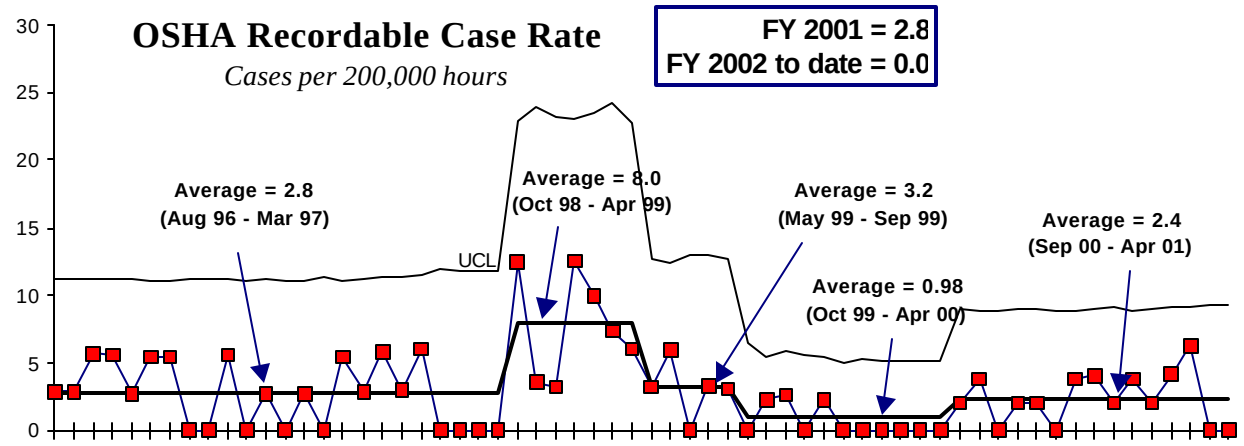
Protected Area reconfiguration work was placed on temporary hold pending new threat guidance from RL. Initiated Development of key decision logic for PFP decommissioning. Defined legacy holdup baseline inventory for Performance Incentive (PI) purposes. Defined a high level approach for legacy holdup reduction that allows for eliminating of security requirements. This approach involves redefining the Material Balance Areas (MBAs) to match the decommissioning process.

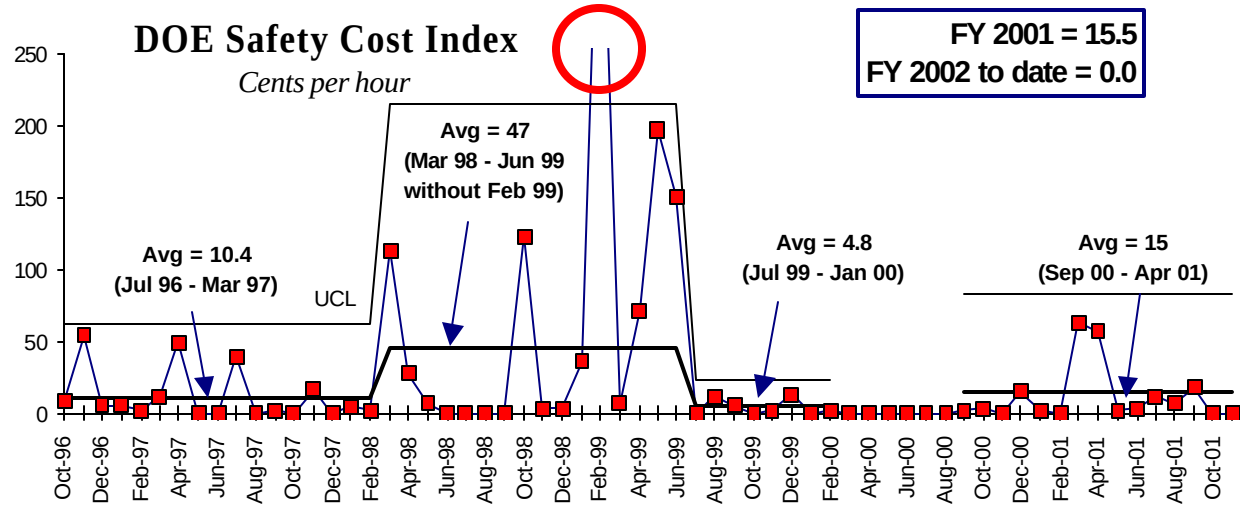
SAFETY

Green

Through November 30, 2001 there were 728 calendar days (approximately 2.4 million staff hours) since the last recorded lost workday injury. There has however, been an increase in the OSHA recordable case rate. Management has increased its presence in the field during all shifts to address this recent trend.

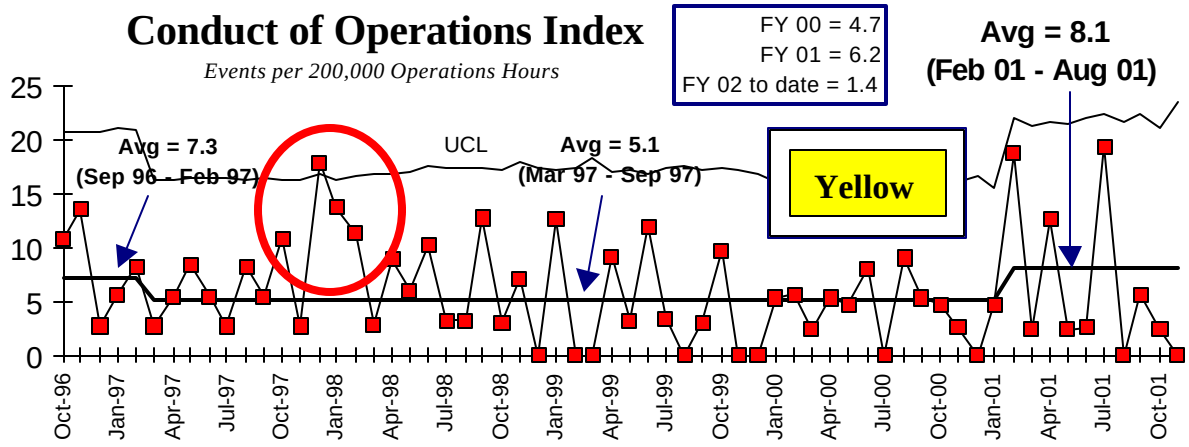






CONDUCT OF OPERATIONS

An all day production pause was held November 2, 2001 to reemphasize the Integrated Safety Management System (ISMS) theme in completing work safely.



BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

Breakthroughs

Nothing to report.

Opportunities for Improvement

Sampling Analysis — Notification was received from the State of Washington Department of Ecology (Ecology) that the "Data Quality Objective Process Summary and Sampling and Analysis Plan and Quality Assurance Project Plan in Support of Group 2B Waste Disposition" was acceptable. This reduces most of the sampling of the Group 2 Pu/Al alloys. *(No further status to be provided)*

UPCOMING ACTIVITIES

Complete repackaging of Hanford Ash in late January 2002.

The final phase of W-460 construction is underway with the construction of the new security entrance into the 2736-ZB building. The anticipated construction completion date is early February.

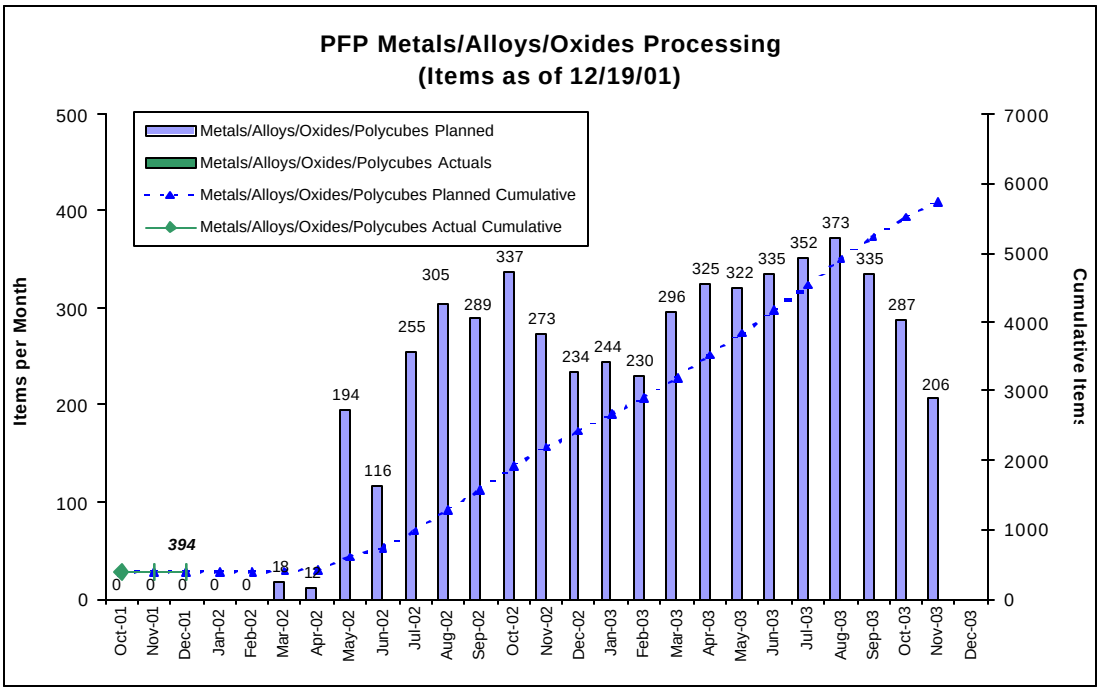
Complete Direct Discard of selected plutonium bearing solutions by March 31, 2002.

MILESTONE ACHIEVEMENT

Number	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
TRP-01-501	Package Alloys for disposition to WIPP or stabilize & package per DOE-STD-3013 criteria	DNFSB	06/30/2001		Moisture Measurement Resolution +60 Days	
TRP-04-505	Hot Startup of the 2736-ZB Stabilization & Packaging System	PI	11/27/2001	11/29/2001	11/29/2001	*Complete*
TRP-01-500	Complete Stabilization & Packaging of Plutonium Solutions	DNFSB	07/31/2002		10/16/2002	BCR NMS-02-003
TRP-02-501	Complete Stabilization & Packaging of Polycubes	DNFSB	08/31/2002		03/21/2003	BCR NMS-02-003
TRP-02-504	Complete Repackaging & Shipment of Hanford Ash to CWC	TPA	08/31/2002			On Schedule
TRP-04-506	Completion of all PU Stabilization & Packaging	PI Stretch	11/30/2003		02/18/2004	BCR NMS-02-003
TRP-03-500	Complete Stabilization & Packaging of Residues	DNFSB	04/30/2004			On Schedule
TRP-05-500	Complete Stabilization & Packaging of Oxides >30% Pu/U	DNFSB	05/31/2004			On Schedule
TRP-08-500	Dismantlement NEPA/ CERCLA Decision Document Complete	RL	09/30/2005			On Schedule
TRP-06-501	Complete 100% of Legacy Pu Holdup Removal & Disposition	PI Stretch	09/30/2006			On Schedule
TRP-06-502	232-Z & PPSL Annex Demolished to Slab-on-Grade	PI Stretch	09/30/2006			On Schedule
TRP-06-503	Protected Area Reduced to 2736-Z/ZB and Yard Storage	PI Stretch	09/30/2006			On Schedule
TRP-06-504	Relocate SNM Required to Reduce the PFP Protected Area	PI Stretch	09/30/2006			On Schedule

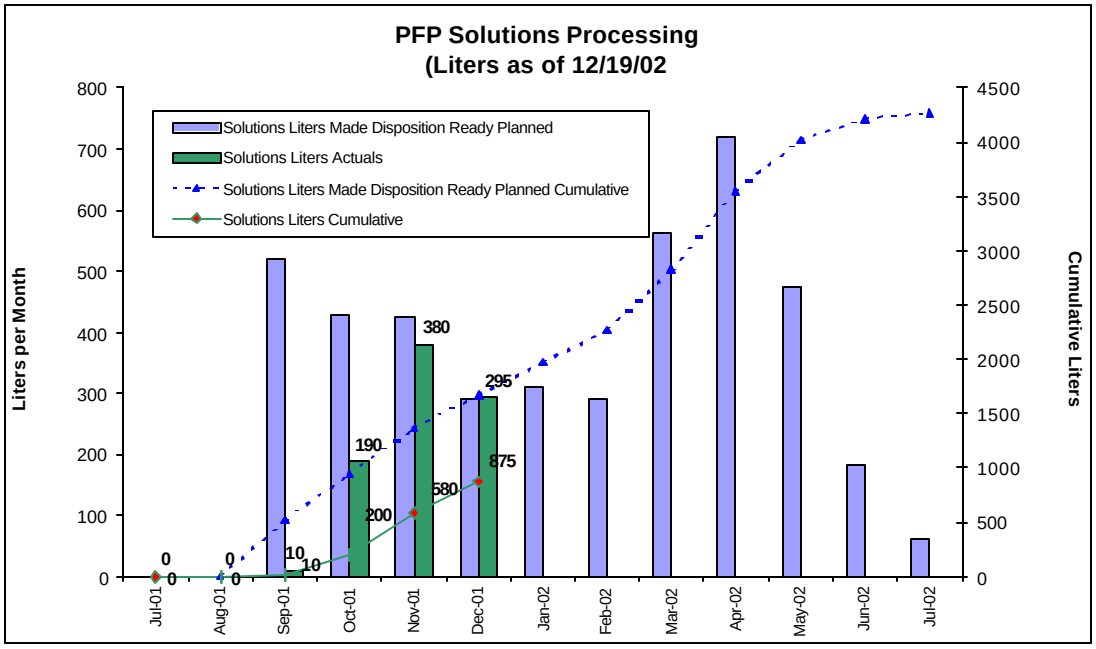
PERFORMANCE OBJECTIVES

METALS/ALLOYS/OXIDES STABILIZATION



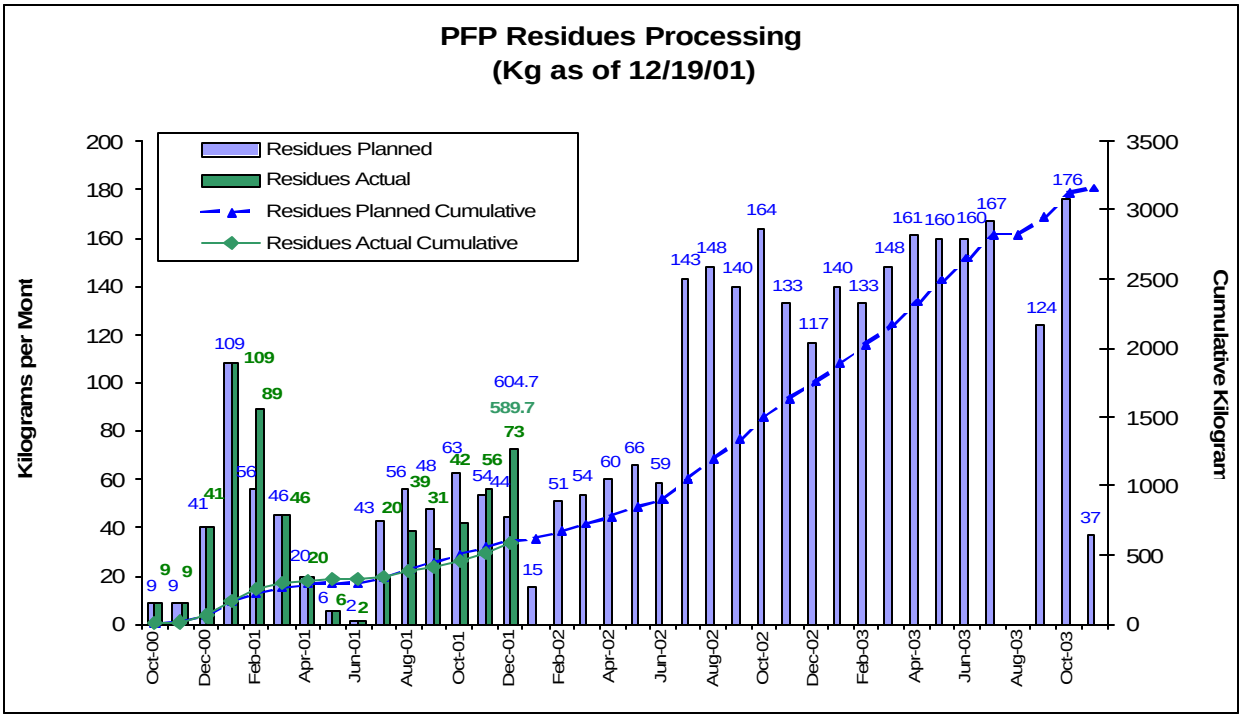
Slightly behind schedule due to the lack of an approved moisture measurement method for impure oxides that prevented the completion of stabilization and packaging of alloys and the thermal stabilization and packaging of magnesium oxide precipitated plutonium solutions.

SOLUTIONS STABILIZATION



Solutions Stabilization is currently behind schedule to the DNFSB milestone completion date of July 31, 2002 due to a lack of an approved moisture measurement system. However, October and November 2001 production rates have shown steady improvement.

RESIDUE STABILIZATION



Hanford Ash processing is currently behind schedule due to intermittent calibration problems with the Segmented Gamma Scan Assay System (SGSAS). Recent production rates indicate repackaging of Hanford ash may be completed in mid to late January 2002.

FY 2002 SCHEDULE / COST PERFORMANCE – ALL FUND TYPES
FISCAL YEAR TO DATE STATUS – ($000)

		FYTD								
	By PBS	BCWS	BCWP	ACWP	SV	%	CV	%	BAC	EAC
PBS RL-CP03	Plutonium Finishing Plant									
WBS 3.3.3.1	Maintain Safe & Secure SNM	773	652	525	$ (121)	-16%	$ 127	19%	$ 5,211	$ 5,417
WBS 3.3.3.2	Maintain Safe & Compliant PFP	4064	4068	3894	$ 4	0%	$ 174	4%	$ 26,529	$ 27,820
WBS 3.3.3.3	SNM Stabilization	5198	4049	3712	$ (1,149)	-22%	$ 337	8%	$ 29,901	$ 30,936
WBS 3.3.3.4	Disposition SNM	630	772	383	$ 142	23%	$ 389	50%	$ 4,179	$ 4,227
WBS 3.3.3.5	Disposition PFP Facility	250	183	43	$ (67)	-27%	$ 140	77%	$ 1,636	$ 1,636
WBS 3.3.3.6	PFP Project Management & Support	2570	2613	2674	$ 43	2%	$ (61)	-2%	$ 11,100	$ 17,857
	Total	$ 13,485	$ 12,337	$ 11,231	$ (1,148)	-9%	$ 1,106	9%	$ 78,556	$ 87,893

FY TO DATE SCHEDULE / COST PERFORMANCE

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

SCHEDULE VARIANCE ANALYSIS: (-$1.1M)

3.3.3.1 Maintain Safe & Secure SNM (-$121K)

Description and Cause: The current 16 percent unfavorable schedule variance is primarily attributable delays in certification of vendor Quality Assurance programs supporting the Canister Monitoring System upgrade and deferral of the annual International Atomic Energy Agency annual Physical Inventory Validation (PIV).

Impact: None.

Corrective Action: Qualification of vendor Quality Assurance programs supporting the Canister Monitoring System upgrade is expected to be completed in late December. The annual International Atomic Energy Agency Physical Inventory Validation (PIV) is currently underway and expected to be completed by December 21, 2001.

3.3.3.2 Maintain Safe & Compliant PFP (-$4K)

Description/Cause: The current 0% percent schedule variance is within the reportable threshold.

Impact: None.

Corrective Action: None.

3.3.3.3 SNM Stabilization (-$1,149K)

Variance cause: The current twenty-two percent unfavorable schedule variance is attributable to delays in stabilization and packaging of Pu solutions and start of thermal stabilization activities in 2736-ZB due to the lack of an approved moisture measurement method, delay in procurement of pipe-overpack containers due to FY2002 continuing resolution limitations, and delay in 3013 outer can packaging due to weld porosity problems.

Impact: The delay in stabilization activities driven by RL disqualification of the Supercritical Fluid Extraction (SFE) system will result in a projected two and a half month delay in completing stabilization activities from November 30, 2003 until February 18, 2004. Weld porosity issues are expected to be resolved in late December enabling the resumption of 3013 outer can packaging.

Corrective Action: Two TGA units have been installed as part of Project W460 to replace SFE as the moisture measurement method in 2736-ZB. TGA systems are also being procured and will be installed in 234-5Z to replace the SFE system. Partial procurement has been placed for pipe-over pack containers to support residue stabilization with delivery expected in January-February 2002. FH is working with Savannah River Technical Center (SRTC) to resolve 3013 container weld porosity issues.

3.3.3.4 Disposition SNM ($142K)

Description and Cause: The primary cause of the twenty-three percent positive variance is attributable to completing FY01 carryover residue storage activities in addition to routine FY 02 planned workscope.

Impact: None.

Corrective Action: None.

3.3.3.5 Disposition PFP Facility (-$67K)

Description and Cause: The twenty-seven percent unfavorable variance is primarily attributable to a later than planned transition of staff from Project W-460 and evolving threat guidance from DOE-HQ that has delayed start of FY 2002 workscope.

Impact: None. Now that the Project W-460 2736-ZB stabilization line is operational, additional resources are expected to become available to support Decommissioning workscope.
Corrective Action: None required.

3.3.3.6 PFP Project Management & Support ($43K)
Description and Cause: The current 2% favorable variance is within the reportable threshold.
Impact: None.
Corrective Action: None.

COST VARIANCE ANALYSIS: ($1.1M)

3.3.3.1 Maintain Safe & Secure SNM ($127K)
Description and Cause: The 19% favorable cost variance is primarily attributable to a temporary staff shortage.
Impact: There has been no impact to completion of routine workscope as a result of current staff levels.
Corrective Action: The temporary staff shortage is expected to self-correct in January 2002.

3.3.3.2 Maintain Safe & Compliant PFP ($174K)
Description/Cause: The five percent favorable cost variance is within the reportable threshold.
Impact: None.
Corrective Action: None.

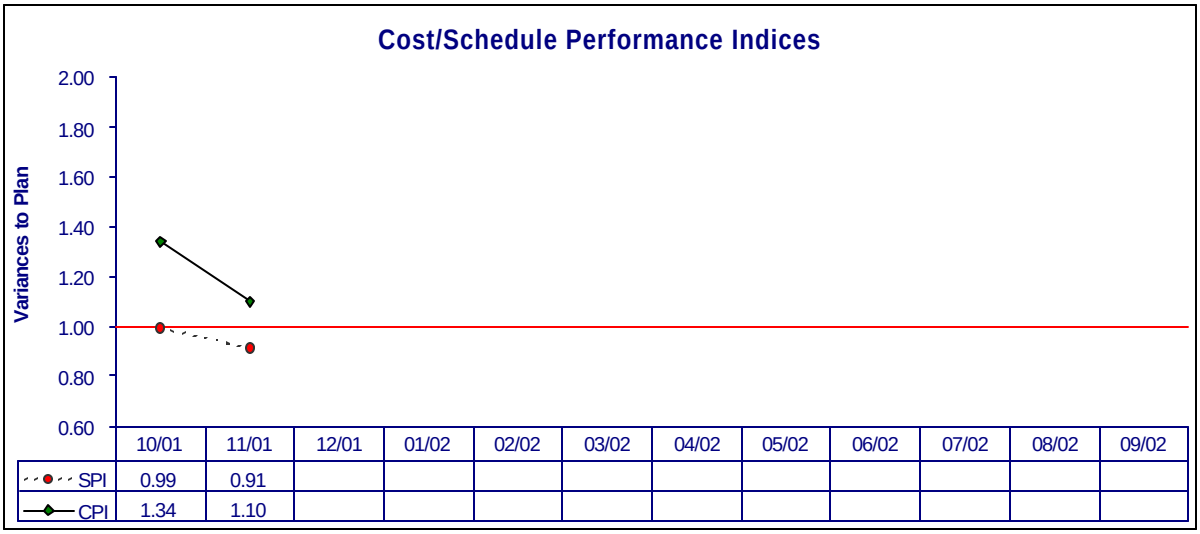
3.3.3.3 SNM Stabilization ($337K)
Description and Cause: The eight percent favorable cost variance is within the reportable threshold and reflects a significant increase in Solutions Stabilization production rates during October and November.
Impact: None.
Corrective Action: None.

3.3.3.4 Disposition SNM ($389K)
Description and Cause: The fifty percent favorable cost variance is primarily attributable to efficiently completing work with less than planned staff and late receipt of a contract estimate for update of the Safety analysis report for packaging (SARP).
Impact: None.
Corrective Action: None.

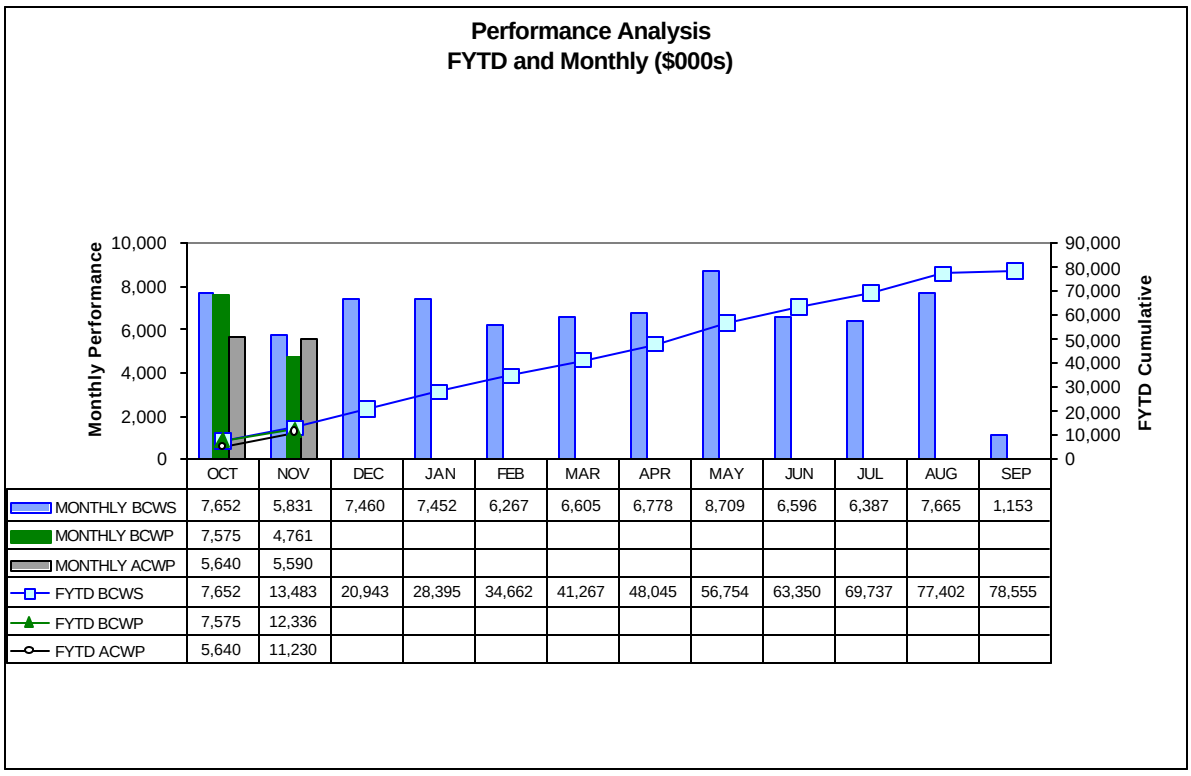
3.3.3.5 Disposition PFP Facility ($144K)
Description and Cause: The seventy-seven percent favorable cost variance is directly attributable to a temporary staff shortage.
Impact: None.
Corrective Action: The current staff underrun is improving as personnel are becoming available through completion of Project W-460.

3.3.3.6 PFP Project Management & Support (-$61K)
Description and Cause: The two percent unfavorable cost variance is within the reportable threshold.
Impact: None.
Corrective Action: None.

SCHEDULE / COST PERFORMANCE (MONTHLY AND FYTD)



	10/01	11/01	12/01	01/02	02/02	03/02	04/02	05/02	06/02	07/02	08/02	09/02
SPI	0.99	0.91										
CPI	1.34	1.10										



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY BCWS	7,652	5,831	7,460	7,452	6,267	6,605	6,778	8,709	6,596	6,387	7,665	1,153
MONTHLY BCWP	7,575	4,761										
MONTHLY ACWP	5,640	5,590										
FYTD BCWS	7,652	13,483	20,943	28,395	34,662	41,267	48,045	56,754	63,350	69,737	77,402	78,555
FYTD BCWP	7,575	12,336										
FYTD ACWP	5,640	11,230										

ISSUES

Technical Issues

Issue: Moisture measurement of stabilized oxides via supercritical fluids extraction was disapproved for use by RL. Completion of stabilization and packaging of plutonium alloys and impure oxides is contingent upon installation and testing of alternate moisture measurement equipment.

Impact: As a result, there is no approved method for moisture testing of all the various categories of stabilized oxides. Completion of alloy processing will be completed within 60 days on approval of a moisture measurement method. Analysis is continuing to determine the full impact of this change.

Corrective Action: The Thermogravimetric Analyzer (TGA) has been identified as an alternative plutonium oxide moisture measurement system replacing the Supercritical Fluid Extraction system for pure oxides. To date, two TGAs have been delivered and installed in 2736-ZB. RL has approved these TGAs for use in moisture measurement of high purity oxides. In addition, the cost and schedule impact due to the absence of an approved moisture measurement methodology for impure oxides is documented in Baseline Change Request NMS-02-003 that is currently in the approval process. Use of the TGAs for determining moisture measurement of impure oxides has yet to be approved by RL. Three additional TGAs have been procured with delivery is expected in late December 2001. These TGAs, to be installed in glovebox HA20-MB, are expected to be available for service in late March 2002.

Issue: The surface weld porosity of 3013 outer containers exceeds American Society of Mechanical Engineer (ASME) Boiler and Pressure Vessel Code, Section VIII standards of .040-inch diameter for this material.

Impact: A number of 3013 outer containers may need to be repackaged to meet ASME standards.

Corrective Action: Savannah River Technology Center (SRTC) performed testing on the Outer Can Welder (OCW) system. The initial testing identified the gap distance between the lid and the 3013 container may contribute/cause porosity in the weld. A final report with recommendations was issued by SRTC on November 26, 2001. A twenty-five container test run was conducted in mid December. Twenty-two (22) of the containers were acceptable. The Savannah River Technology Center is evaluating the results of this test run.

Regulatory, External, and DOE Issues and DOE Requests

Issue: No other issues identified at this time.

Impact: None at this time.

Corrective Action: None at this time.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

FY 2002 PFP Baseline Change Request Status								
BCR NUMBER	BCR TITLE	FY 02 IMPACT	SCH	TECH	DRAFT COPY	NMS APPROVAL	FH APPROVAL	DOE-RL APPROVAL
NMS-02-001	MYWP Bridge (FH-2001-008)	-----	X	X	30-Sep-01	30-Sep-01	30-Sep-01	
NMS-02-002	Project W-460 Hot Startup Date	-----	X	X	---------- Cancelled - Included in NMS-02-003 ----------			
NMS-02-003	Moisture Measurement Impacts	$294	X	X	04-Nov-01	05-Nov-01	08-Nov-01	
NMS-02-004	HEPA Filter Testing, Rev 1	$12		X	30-Oct-01	28-Nov-01	Not Required	Not Required
NMS-02-005	Revise Solutions Budget	-----			02-Nov-01	05-Nov-01	Not Required	Not Required
NMS-02-006	Solutions Milestone	-----	X		05-Nov-01	05-Nov-01	12-Nov-01	
NMS-02-007	Weld Porosity - SRS Support	$185	X	X	---------- Cancelled - Letter Sent to DOE-RL ----------			
NMS-02-008	DNFSB 2000-2, Phase 2	$91	X	X	08-Nov-01	28-Nov-01	Not Required	Not Required
NMS-02-009	Project W-460 TPC Change	-----			13-Nov-01	14-Nov-01	14-Nov-01	
CP03-02-010	Revise Maintenance Budget	-----			13-Nov-01	27-Dec-01	Not Required	Not Required
CP03-02-011	Direct Discard TPA Milestone	-----	X		14-Dec-01	27-Dec-01		Not Required
CP03-02-012	SS&C TPA Milestone	-----	X		14-Dec-01	27-Dec-01		Not Required